

# **Exhibit F**

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

SINGULAR COMPUTING LLC,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Civil Action No. 1:19-cv-12551-FDS

**NOTICE OF DEPOSITION OF GOOGLE LLC**  
**PURSUANT TO FED. R. CIV. P. 30(B)(6)**

PLEASE TAKE NOTICE that Plaintiff depose, by oral questions, Defendant, pursuant to Fed. R. Civ. P. 26 and Fed. R. Civ. P. 30(b)(6), regarding the matters identified in the attached Schedule A.

The deposition will occur remotely by videoconference, commencing at 9:00 am EST on May 26, 2021, or at another mutually agreed date and time. The deposition will continue from day to day until complete.

The deposition will be held before a qualified court reporter and will be recorded videographically and stenographically.

Prior to the deposition, Defendant shall designate in writing to Plaintiff the name(s) of the person(s) who will testify on its behalf in response to this Notice.

Dated: May 5, 2021

By: /s/ Paul J. Hayes  
Paul J. Hayes (BBO #227000)  
Matthew D. Vella (BBO #660171)  
Kevin Gannon (BBO #640931)  
Daniel J. McGonagle (BBO #690084)  
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ATTORNEYS FOR THE PLAINTIFF

**CERTIFICATE OF SERVICE**

I certify that on May 5, 2021, I served this document on Defendant by sending a copy via email to Defendant's counsel of record.

/s/ Paul J. Hayes

**SCHEDULE A**

**DEFINITIONS AND INSTRUCTIONS**

The following definitions and instructions shall apply to each of the following topics of examination.

1. “Google,” “you” “Defendant” or “your” means Google, LLC, its employees, officers, directors, attorneys, and its agents, parents, subsidiaries, branches, predecessors, or successors-in-interest, or any other persons who have acted or purported to act for its behalf.

2. “Plaintiff” or “Singular” means Singular Computing LLC.

3. “Accused Products” means all products, computer systems, devices, and other hardware/software identified in Plaintiff’s Amended Complaint (Dkt. 37) and in Plaintiff’s Infringement Contentions, including without limitation at least:

- i. Google Cloud Tensor Processing Unit Version 2 (“TPU v.2”);
- ii. Google Cloud Tensor Processing Unit Version 3 (“TPU v.3”);
- iii. Software that runs workloads on TPU v.2 or TPU v. 3 including TensorFlow; and
- iv. Larger compute systems that incorporate (i), (ii) and/or (iii) such as TPU Pods.

4. “Accused Services” means all Google services delivered in whole or in part by use of any Accused Product, including Translate, Photos, Search, Assistant, Gmail and Cloud (including Cloud AI and Cloud TPU) .

5. “Asserted Patents” or “Patents-in-Suit” refers, collectively, to US Patent Nos. 8,407,273 (“’273 Patent”); 9,218,156 (“’156 Patent”); and 10,416,961 (“’961 Patent”), as well as any other patent(s) that Plaintiff asserts in this action.

6. “Communication” means the transmittal or receipt of information (in the form of facts, ideas, inquiries, or otherwise) regardless of the medium used to transmit or receive the information.

7. “Document” is synonymous in meaning and equal in scope to the usage of this term in Fed. R. Civ. P. 34(a). Any draft or non-identical copy is a separate document within the meaning of this term. Documents include communications.

8. “Person” means any natural person or any business, legal, or governmental entity or association.

**MATTERS FOR EXAMINATION**

The deponent(s) shall be prepared to address the following topics:

1. The structure, function, and operation of the Accused Products, including those features and functionalities identified in Plaintiff's Infringement Contentions.
2. Google's research and development efforts relating to the Accused Products, including Google's alleged conception and design of the Accused Products.
3. Google's decision to develop, build, and implement in its data centers the Accused Products.
4. Google's efforts to design around any claim of the Asserted Patents.
5. The utility and advantages of the Accused Products as perceived by Google over any competing technologies.
6. Google's licensing and intellectual property policies and practices.
7. Any patents or patent applications filed by Google that describe any aspect of the Accused Products; any continuations, continuations-in-part, or divisions thereof; and any reissues or extensions thereof.
8. Sworn testimony, including but not limited to deposition and trial testimony, by Google or anyone testifying on Google's behalf in any proceeding relating to the Accused Products.
9. Acquisitions, licenses, patent licenses, settlement agreements, covenants not to sue, or other agreements entered into by Google relating to the Accused Products.
10. Revenues, costs and/or expenses, and profits for the Accused Products or any products or services (including the Accused Services) making use of the Accused Products.
11. Research and development costs and expenses relating to the Accused Products.
12. Projections for sales, use or cost savings related to the Accused Products, or for any products or services (including the Accused Services) making use of the Accused Products.
13. Development profit and loss statements for the Accused Products, or any products or services (including the Accused Services) making use of the Accused Products.
14. Google's publicly-disclosed financial statements.
15. The monetary and/or nonmonetary value that Google and its customers and end users of the Accused Products and Accused Services attribute to the features of the Accused

Products, including the existence and substance of any related studies, surveys, presentations, reports, or other similar documentation.

16. Presentations, whether written, verbal, recorded, televised and/or broadcast (via the Internet or otherwise), concerning the Accused Products and Accused Services.

17. Internal analyses or market studies prepared by (or for) Google concerning the importance or benefits of the Accused Products and Accused Services, including any features or components thereof.

18. Profit and loss (P&L) statements of any product group or business segment(s) responsible (or formerly responsible) for the Accused Products or Accused Services.

19. Product Requirement Documents (PRD) or similar development planning documents concerning the Accused Products.

20. Capital asset requests and analyses associated with developing Google's data centers without the Accused Products.

21. Google's long-term capital investment plans relating to its data centers.

22. Projections of Google's long-term data center needs and shortfalls.

23. Capital asset requests and analyses associated with developing Google's data centers with the Accused Products.

24. Operating budgets and plans for Google data centers operating with and without the Accused Products, including without limitation size and energy requirements.

25. Profit and loss statements or other financial analyses prepared by Google related to the actual operation of its data centers with and without the Accused Products.

26. Google's business planning, long-term capital expenditure plans, or other studies from prior to the use of the Accused Products.

27. Google's decision to invest in designing and making the TPU v.2 and TPU v.3 in-house, including business analyses, capital asset requests, research and development expenditure requests, research and development reports and presentations related to the development of the Accused Products, and presentations to management and/or Google's board to support the decision to implement the Accused Products.

28. The fabrication of the Accused Products, including costs of fabrication and testing of the Accused Products.

29. Budgets and forecasts relating to the development and operation of all Google Cloud businesses, including Cloud Platform, Cloud AI, and Cloud TPU.

30. Google's projected or actual revenues, costs and profits from the operation of all Google Cloud businesses, including Cloud Platform, Cloud AI, and Cloud TPU, or any other Google service or business that makes use of the Accused Products.

31. Studies, analyses, and tests of the technical and cost benefits, including energy, maintenance, GPU purchases, and IT infrastructure technical and costs benefits due to the consolidation of Neural Networks training and inference on TPU v.2

32. Quantifications, evaluations and estimates of the value to Google of the benefits of using the Accused Products, including, but not limited to, improved search results, advertising placement, increases in volume of search and advertising, increased revenues, profits, advertising rates, and/or click-through rates.

33. Incremental benefits, including increased revenues or profits projected or earned by Google from sale or use of the Accused Products compared to other architectures.

34. Google's alleged conception, design, development and testing of the "bfloat16" number format and its use of the "bfloat16" number format in the Accused Products.

35. The identity of all employee(s) at Google who allegedly first conceived of the "bfloat16" number format and any applications thereof, including its use in the Accused Products.

36. As of 2017, the average cost to build and to maintain a data center.

37. As of 2017, Google's corporate return on investment (ROI) policy.

38. Sebastian Thrun's involvement in the design, development, testing, use, and launch of the Accused Products, including the contents of any internal communications, documents, presentations, reports, investigations, emails, memoranda, or any other document authored, received, or reviewed by Sebastian Thrun referring or relating to the Accused Products.

39. Quoc Le's involvement in the design, development, testing, use, and launch of the Accused Products, including the contents of any internal communications, documents, presentations, reports, investigations, emails, memoranda, or any other document authored, received, or reviewed by Quoc Le referring or relating to the Accused Products.

40. Andrew Phelps' involvement in the design, development, testing, use, and launch of the Accused Products, including the contents of any internal communications, documents, presentations, reports, investigations, emails, memoranda, or any other document authored, received, or reviewed by Andrew Phelps referring or relating to the Accused Products.

41. Astro Teller's involvement in the design, development, testing, use, and launch of the Accused Products, including the contents of any internal communications, documents, presentations, reports, investigations, emails, memoranda, or any other document authored, received, or reviewed by Astro Teller referring or relating to the Accused Products.



42. Analyses of the relative benefits, performance, and cost prepared by or for Google of any non-infringing alternatives or acceptable substitutes for the Accused Products.

43. Google's cost of capital for tangible and intangible assets, project-specific discount rates, and/or weighted average cost of capital.

44. Comparisons of the Accused Products (and/or features and functions thereof) to any other product of Defendant and/or of any other entity (and/or features and functions thereof).

45. Studies by Google or third parties discussing the benefits of using the Accused Products as opposed to other products, computer systems, devices, and other hardware/software having architectures that differ from those used by the Accused Products.

46. Google's acquisition of DeepMind Technologies, including without limitation purchase price allocations, the purchase rationale, board approvals, and studies and analyses of the activities of DeepMind Technologies prepared by or for Google.